

WHAT IS CLAIMED IS:

1 A conductor composition comprising:

an organic vehicle, and

a conductive powder made of a noble metal or an alloy based on a noble metal, contained in a mass ratio of 80 mass % or more in the conductor composition, and having an average particle size of 0.8 μm or less, and a ratio (D_{50}/D_{min}) of a medium value D_{50} of the particle size to a minimum value D_{min} of detectable particle sizes is in a range of 1 to 5.

2. The conductor composition according to claim 1, wherein a ratio ($V_{1\text{rpm}} / V_{10\text{rpm}}$) of a viscosity $V_{1\text{rpm}}$ measured under conditions at 1 rpm with a spindle No. 4 with a Brookfield rotational viscometer and a viscosity $V_{10\text{rpm}}$ measured under conditions at 10 rpm with a spindle No. 4 with the viscometer is in a range from 2 to 5.

3. The conductor composition according to claim 2, wherein the viscosity $V_{1\text{rpm}}$ is in a range of 200 to 700 Pa·s, and the viscosity $V_{10\text{rpm}}$ is in a range of 100 to 300 Pa·s.

4. The conductor composition according to claim 1, wherein a solvent constituting the organic vehicle has a boiling point of 200°C or more.

5. The conductor composition according to claim 4, wherein the solvent comprises one or at least two selected from the group consisting of butyl carbitol, butyl carbitol acetate, and 2,2,4-trimethyl-1,3-pentanediol monoisobutyrate.

6. The conductor composition according to claim 1, wherein the conductive powder is made of silver or an alloy based on silver.

7. The conductor composition according to claim 1, wherein the conductive powder has D_{50} of about 0.3 μm and D_{min} of about 0.06 to 0.25 μm .

8. The conductor composition according to claim 1, wherein the conductive powder has

D_{50} of about 0.7 μm and D_{min} of about 0.14 to 0.6 μm .

9. The conductor composition according to claim 1, comprising a viscosity modifier in a ratio of 0.05 to 3 parts by mass with respect to 100 parts by mass of the conductive powder.

10. The conductor composition according to claim 9, wherein the viscosity modifier is one or at least two selected from the group consisting of dioctylphthalate, dioctyladipate, and dibutylphthalate.

11. A method for producing an electronic component comprising a base material on which a film conductor is formed, comprising the steps of:

preparing the conductor composition which comprises an organic vehicle, and a conductive powder made of a noble metal or an alloy based on a noble metal, contained in a mass ratio of 80 mass % or more in the conductor composition, and having an average particle size of 0.8 μm or less, and a ratio (D_{50}/D_{min}) of a medium value D_{50} of the particle size to a minimum value D_{min} of detectable particle sizes is in a range of 1 to 5;

attaching the conductor composition onto the base material; and

firing the attached conductor composition.

12. The method according to claim 11, wherein in the attaching step, the conductor composition is attached onto the base material by screen printing.

13. The method according to claim 11, wherein the film conductor has a linear portion whose width is 50 μm or less.

14. The method according to claim 12, wherein the film conductor has a portion in which a plurality of linear conductor films are formed substantially in parallel, a width of the linear conductor films in that portion is about 20 to 50 μm , and a gap between the linear conductor films in that portion is about 20 to 50 μm .

15. The method according to claim 11, wherein the base material is a glass substrate.

16. The method according to claim 11, wherein the firing step is performed at a maximum firing temperature of 600 to 900°C.